

# SEQUENCE LISTING

<110> Wittwer, Carl T.  
 Ririe, Kirk M.  
 Rasmussen, Randy P.  
 Hillyard, David R.

<120> CONTAINER FOR CARRYING OUT AND MONITORING BIOLOGICAL  
 PROCESSES

<130> 7475-66667

<140>

<141>

<150> 08/869,725

<151> 1997-06-04

<150> 08/658,993

<151> 1996-06-04

<150> 08/537,612

<151> 1995-10-02

<150> 08/179,969

<151> 1994-01-10

<150> 07/815,966

<151> 1992-01-02

<150> 07/534,029

<151> 1990-06-04

<160> 6

<170> PatentIn Ver. 2.0

<210> 1

<211> 20

<212> DNA

<213> Hepatitis B virus

<400> 1

cgtggtggac ttctctcaat

20

<210> 2

<211> 20

<212> DNA



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1  NEW      GOTO 60:REM      ***I/O stepper (Z=$ (0), Q=z(72)) ***
2  IF (XBY(55307).AND.64)=0 THEN( Z(0)=XBY(55306) : GOTO 3
3  DO : WHILE (XBY(55307).AND.113)=113
4  I=0 : DO : I=I-1 : XBY(55306)=ASC(S(0),I)
5  WHILE ASC(S(0),I)<>11 : RETURN
6  DO : WHILE (XBY(55307).AND.64)=64
7  I=0 : DO : Z(I)=XBY(55306)
8  I=I-1 : UNTIL Z(I-1)=12 : RETURN
9
10 REM      ***error check***
11 IF TX<0 THEN TX=0
12 RETURN
13 IF TX<-251 THEN TX=-251
14 RETURN
15 IF TX>251 THEN TX=251
16 RETURN
17
18 GOSUB 50:TP1=TP:TL=TIME
19 DO:UNTIL TEND-TL=0.2
20 GOSUB 50:TP2=TP:T2=TIME
21 SL=(TP2-TP1)/(T2-TL):IF SL<>0 THEN IT=(TG-TP2)/SL
22 PRINT USING(***,**), "SL=",SL,"IT=",IT,"AT TEMP=",T2
23 IF IT>1 GOTO 10
24 RETURN
25
26 REM      ***temperature measurement***
27 B=XBY(55304):F=XBY(55305):G=XBY(55304):TP=(F*256+G+100)/78.3: RETURN
28
29 CLEAR : STRING 150,72 : DIM Z(72)
30 DTEMP=95:DTEM=1:DS=10
31 ATMP=60:ATM=1:AS=20
32 EXTMP=74:EXTM=15:ES=1:CYCLE=100
33 PRINT USING(***), " ",TAB (20),"TEMP",TAB (30),"TIME",TAB (40),"SLOPE"
34 PRINT "1): DENATURATION", TAB(30),DTEMP,TAB(30),DTEM,TAB(40),DS
35 PRINT "2) ANNEALING", TAB(20),ATMP,TAB(30),ATM,TAB(40),AS
36 PRINT "3) EXTENSION",TAB(20),EXTMP,TAB(30),EXTM,TAB(40),ES
37 PRINT "4) CYCLES", " ",CYCLE:PRINT
38
39 INPUT "TYPE # TO CHANGE OR 0 IF OK (CHOICES ARE 0,1,2,3, OR 4)?",J
40 IF J=0 THEN GOTO 170
41 ON J GOSUB 120,130,150,160
42 PRINT:GOTO 80
43 INPUT "ENTER DENATURATION Temp, Time, Slope: ",DTEMP,DTEM,DS
44 IF DTEMP>98 GOTO 110
45 RETURN
46 INPUT "ENTER ANNEALING Temp, Time, Slope: ",ATMP,ATM,AS
47 IF AS<0 GOTO 110
48 IF AS>21 GOTO 130
49 RETURN
50 INPUT "ENTER EXTENSION Temp, Time, Slope: ",EXTMP,EXTM,ES:RETURN
51 INPUT "ENTER Number of Cycles: ",CYCLE:RETURN
52 $ (0)="maxi 500;spl 200;hfl 2;sl 1;exr": GOSUB 3 : GOSUB 7
53 FOR I=0 TO 10 : PRINT CHR(Z(I)), : NEXT I : PRINT
54
55 $ (0)="gol md:hfl 2;wfo =x...;sl":GOSUB 3: rem open
56 PRINT "WAIT FOR COOLING":XBY(55304)=3
57 DO : GOSUB 50 : UNTIL TP<45
58 PRINT "TEMP=",TP," LOAD SAMPLES AND THEN PRESS A KEY"
59 W=GET : IF W=0 GOTO 240
60
61 TMC=0 : WS=0: CLOCK 0 : TIME=0 : DBY(71)=0 : CLOCK 1
62 $ (0)="hfl 1;spl 100;gol;wfo =x...;sl":GOSUB 3: rem close
63 FOR V=1 TO CYCLE
64 PRINT "D.": TG=DTEMP:XBY(55309)=4:IF V=1 THEN TG=DTEMP+(DS/4)

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120 WS=(DS*10+WS*9)/10:TX=INT(WS+0.5):GOSUB 15
125 XBY(65508)=TX:GOSUB 50:IF TP>TG GOTO 140
130 IF TX<>DS*10 GOTO 120
133 GOSUB 30
135 GOSUB 50:IF TP<TG GOTO 135
140 TG=DTMP:TB=TIME
145 WS=(5*WS+10*(TG-TP))/7:TX=INT(WS+0.5)
150 IF TG>0 THEN GOSUB 35:XBY(65508)=TX:XBY(65509)=4
155 IF TX<0 THEN GOSUB 20:XBY(65508)=0:XBY(65509)=4-TX
160 IF V=1 THEN IF DTMP-5>(TIME-TB) GOTO 180
170 IF DTMP<(TIME-TB) GOTO 500
180 GOSUB 50: GOTO 145

500 PRINT "A",:XBY(65508)=0:TG=ATMP
845 S(0)="spl 200;gol nd;hsl 2;wfo =.x...sl":GOSUB 3:
855 XBY(65509)=AS*10
860 GOSUB 30
890 TB=TIME:WS=-AS*10
911 WS=(4*WS+20*(TG-TP))/5:TX=INT(WS+0.5)
915 IF TG>0 THEN GOSUB 25:XBY(65508)=TX:XBY(65509)=4
918 IF TX<0 THEN GOSUB 20:XBY(65508)=0:XBY(65509)=4-TX
920 IF ATMP-1<(TIME-TB) GOTO 925
924 GOSUB 50: GOTO 913

925 PRINT:PRINT "E",:XBY(65509)=4:TG=ATMP+1
930 S(0)="spl 1;spl 50;gol:wfo =x...sl":GOSUB 3:WS=0: REM CLOSE
935 WS=(DS*10+WS*9)/10:TX=INT(WS+0.5):GOSUB 15:GOSUB 25:XBY(65508)=TX
937 GOSUB 50:IF TP>TG-1 GOTO 970
940 IF TX<>DS*10 GOTO 935
950 GOSUB 50: IF TP<TG-1 GOTO 950
970 TB=TIME
980 WS=(WS+5*(TG-TP))/1:TX=INT(WS+0.5)
983 IF TG>0 THEN GOSUB 25:XBY(65508)=TX:XBY(65509)=4
987 IF TX<0 THEN GOSUB 20:XBY(65508)=0:XBY(65509)=4-TX
990 IF DTMP<(TIME-TB) GOTO 1000
995 GOSUB 50: GOTO 980
1000 CTIME=TIME-TMC: TMC=TIME: PRINT "CYCLE",V,"TIME",CTIME
1050 NEXT V

1055 XBY(65508)=0:XBY(65509)=255
1060 INPUT "STRAND REANNEALING (Y/N) ?":S(1)
1070 IF ASC(S(1),1)=73 GOTO 1190
1100 PRINT "STRAND REANNEALING IN PROCESS..."
1110 TG=DTMP:XBY(65509)=4
1120 WS=(DS*10+WS*9)/10:TX=INT(WS+0.5):GOSUB 15
1130 XBY(65508)=TX:GOSUB 50:IF TP>TG GOTO 1170
1140 IF TX<>DS*10 GOTO 1120
1150 GOSUB 30
1155 GOSUB 50:IF TP<TG GOTO 1150
1170 TB=TIME
1180 WS=(11*WS+10*(TG-TP))/12:TX=INT(WS+0.5)
1185 IF TG>0 THEN GOSUB 25:XBY(65508)=TX:XBY(65509)=4
1190 IF TX<0 THEN GOSUB 20:XBY(65508)=0:XBY(65509)=4-TX
1193 IF 5<(TIME-TB) GOTO 1200
1196 GOSUB 50: GOTO 1190
1200 XBY(65508)=0:XBY(65509)=255:WS=0
1210 DO:GOSUB 50:UNTIL TP<75

1220 TB=TIME
1230 WS=(WS+5*(75-TP))/2:TX=INT(WS+0.5)
1240 IF TG>0 THEN GOSUB 25:XBY(65508)=TX:XBY(65509)=4
1250 IF TX<0 THEN GOSUB 20:XBY(65508)=0:XBY(65509)=4-TX
1260 IF 60<(TIME-TB) GOTO 1280
1270 GOSUB 50: GOTO 1230

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1280 KEY(65508)=0:KEY(65509)=155
1290 INPUT "ANOTHER RUN (Y/N) ? ",$(1)
1300 IF ASC$(1,1)=78 GOTO 2000
1400 PRINT:$(0)="go1 nd;h11 9;w10 =.x..;sl":GOSUB 1:GOTO 80
2000 $(0)="go1 nd;h11 9;w10 =.x..;sl":GOSUB 1:END

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00631339 080300

Temperature processor(IC 2) hex file (Temp24a.hex):

```
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Stepper processor(IC 3) hex file(Step23.hex):

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```

Serial snoop processor(IC 16) hex file(Serial5.hex):

```

:10000000680006061E0A1209080C2A0003042803C9
:100010000606E8051009EA02060A08022900000A95
:10002000540C130A6C0C2B00EB02140A0008010C90
:100030000600000C0500060C2500000A120C8901C0
:1000400043066504130C890143066505140C8901F8
:1000500043060504150C890143060505160C8901A4
:1000600043062504170C890143062505180C890150
:1000700043064504190C890143064505200C2B0055
:06008000EB02400A000A39
:0203FE00170ADC
:00000001FF

```

00E080"6EEFE960